

REMARKS

Applicants have thoroughly considered the Examiner's remarks and acknowledge the Examiner indication that claims 9-11, 18 and 19 would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. However, applicants respectfully request further reconsideration of the application in light of the following remarks. Claims 1, 5, 12, and 16 have been amended by this Amendment B. If the Examiner feels, for any reason, that an interview will expedite prosecution of this application, applicants invite the Examiner to telephone the undersigned attorney. Claims 1-23 are presented in the application for further reconsideration.

Claim Rejections - 35 U.S.C. § 102

Claims 1-3, 1, 16, and 17 stand rejected under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent No. 5,441,223 to Young et al (Young). A claim is anticipated only if each and every element as set forth in the claim is disclosed, either expressly or inherently, in a single prior art reference. Verdegel Bros. v. Union Oil. Of California, 814 F.2d 628, 631 (Fed. Cir.1987). Applicants submit that each and every element as set forth in claims 1-23 is not found, either expressly or inherently, in Young. Thus, the cited reference does not anticipate the claimed invention.

Young discloses a controller *for model trains* on a train track. In particular, Young discloses a controller that transmits RF signals between a rail of the track and earth ground to generate an electromagnetic field which extends *for several inches around the track*. (See column 1, lines 62-64). In particular, Young discloses that a hand-held remote control unit 12 is used to transmit RF signals to a base unit 14 which is connected to train tracks 16. (See Column 3, lines 49-54). The Base unit 14 Base unit 14 transmits an RF signal between the track and earth ground, which generates an electromagnetic field, indicated by lines 22, which propagates along the track. This field will pass through a locomotive 24 and will be received by a receiver 26 inside the locomotive an inch or two above the track. The electromagnetic field (*not a communication signal*) will also propagate along a line 28 to a switch controller 30. Switch controller 30 also has a receiver in it, and will itself transmit control signals to various devices,

such as the track switching module 32 or a moving flag 34 or a device 31. (See Young, column 3, lines 5-22).

In contrast, the present application discloses a system for remotely monitoring and controlling a switched electrical power supply which powers electrically operated railroad wayside signaling equipment, where the distance between the controller and the signaling equipment can be several thousand feet. (See Application publication paragraph 0006). As described in the application, some prior art wayside systems use four (4) power lines to supply power to signaling equipment (e.g., signal 1) remote from the controller and four additional power lines may be used supply power to different signaling equipment (e.g., signal 2) remote from the controller. The reliability of the signals is dependent upon the reliability of each the power lines connecting the controller and the signals. According to the present invention, a system is provided for such prior art systems such that only two of the four power lines are employed. In particular, control signals from a central controller 202 are provided to a transmitter 204, such as a controller RSDi unit. The transmitter 204 converts the control signals from the controller 202 into communication signals that are modulated and transmitted over the two power lines as low power signals to each of a first wayside equipment (e.g., signal 1) 206 and a second wayside equipment.

Moreover, rather than generating an electromagnetic field for propagation along a track or line, the present invention involves the transmission of low power communication signals along power lines. An electromagnetic field is employed in Young because of the limited distances (several inches) involved in operating a model train set. In contrast, rather than generating an electromagnetic field that extends for several inches around the track, the communication signals of the present invention control operation of railroad equipment and can be transmitted several thousand feet.

To this end, amended claim 1 recites, in part, "[a] system for remote control of an electrically operated railroad wayside equipment having a power supply for powering the wayside equipment, said power supply providing power to the way side equipment via two power lines," and said system including "a central controller providing central control signals," "a transmitter associated with the controller for receiving the control signals and converting the control signals into communications signals for transmission via the two power lines. Young fails to teach or suggest a transmitter associated with the controller for receiving the control

signals and converting the control signals into communications signals transmission via the two power lines. Accordingly, Young fails to anticipate amended claim 1.

Claim Rejections - 35 U.S.C. § 103

Claims 4-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Young, and claims 13-15 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of U.S. Patent No. 5,441,223 to Ireland. With respect to claims 4-8, the Office acknowledges that "Young shows, in Figure 1, only one equipment controller for controlling the wayside equipment at a location near the track layout," but asserts "it would have been obvious to one skilled in the art to provide additional wayside equipment and equipment controllers to serve other locations of the large track layout." (See Office action at page 3). However, as discussed above, Young fails to teach or suggest a transmitter associated with the controller for receiving the control signals and converting the control signals into communications signals for transmission via the two power lines as claimed and described in the present application. Therefore, claim 1 is believed to be allowable over the cited references.

Furthermore, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Amended claim 1 is directed, in part, to a transmitter associated with the controller for receiving the control signals and converting the control signals into communications signals for transmission via the two power lines. The Young reference discloses that by using an electromagnetic field only along the track, the extent of field generated is limited, thus limiting the power required to generate the field and avoiding transmitter licensing requirements. (See column 1, lines 67-68, and column 2, lines 1-5). Modifying the reference to transmit an electromagnetic field along two power lines for several thousand feet would likely require more power and, thus, possibly a transmitter license. According, applicants submit that the proposed modification of the prior art would change the principle of operation of the prior art invention being modified, and therefore the reference is not sufficient to render the claim 1 *prima facie* obvious.

With respect to claims 13-15 and 20-23, the Office notes that Young's system is designed with a one-way communication capability to control trains and wayside equipment with no

feedback information, but asserts that "it would have been obvious to one skilled in the art to modify the system of Young to include bi-directional communication capabilities for allowing the trains and the wayside equipment to feedback information as suggested in Ireland." (See Office action at page 4). However, Ireland fails to remedy the deficiencies of Young it that it also fails to teach or suggest a transmitter associated with the controller for receiving the control signals and converting the control signals into communications signals for transmission via the two power lines. Accordingly, whether considered alone or in combination, the cited references fail to teach or suggest all of the features of applicants' claimed invention. Thus, *prima facie* obviousness cannot be established. (See MPEP 2142 and 2143).

In view of the foregoing, applicants submit that independent claim 1 is allowable over the cited art. The remaining dependent claims are believed to be allowable for at least the same reasons as the independent claims from which they depend.

It is felt that a full and complete response has been made to the Office action and, as such, places the application in condition for allowance. Such allowance is hereby respectfully requested. Although the prior art made of record and not relied upon may be considered pertinent to the disclosure, none of these references anticipates or makes obvious the recited invention. The fact that Applicants may not have specifically traversed any particular assertion by the Office should not be construed as indicating Applicants' agreement therewith.

The Applicants wish to expedite prosecution of this application. If the Examiner deems the claims as amended to not be in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the claims in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency or overpayment of any required fee during the entire pendency of this application to Deposit Account No. 07-0846.

Respectfully submitted,



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